rats equipped with intracardiac catheter. The administration of catecholestrogens on the morning of proestrus resulted in suppression of the prolactin surge. Only catecholestrogens with a low affinity for the estrogen receptor, such as 2-hydroxyestrone and 2-hydroxyestradiol-17α were effective in this respect, while the estrogenic catecholestrogen 2-hydroxyestradiol-17β was unable to influence the prolactin surge. The effectiveness of the prolactin surge suppression was highly dependent on the state of the endogeneous estradiol levels at the time of administration. Only doses given just before the peak secretion of estradiol were effective in blocking the prolactin surge.

The evidence indicate that the effect of the catecholestrogen on the prolactin surge was different between each catecholestrogen depending on the it's estrogeneic potency, and the suppressive effect does not involve convenient competition for the estrogen receptor.

147. Intracellular Mechanism of Prolactin Release and Inhibitory Effect of Dopamine on the Pathway in Pituitary Cells

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The relationship between 5-Hydroxyeicostatetraenoic acid (5-HETE) and phorbol myristate acetate (PMA) in the process of prolactin (PRL) release, and the inhibitory effect of dopamine on release were investigated in rat anterior pituitary cells. Arachidonate or its lipoxygenase products, 5-HETE, significantly increased PRL release from rat pituitary cells in a concentration dependent manner. 10 nM 2-(12-hydroxydodeca-5,10-diynyl)-3,5,6-trimethyl-1,4-benzoquinone (AA-861), 5-lipoxygenase blocker, decreased arachidonatestimulated PRL release. PMA markedly decreased cytosolic protein kinase C activity and increased enzyme activity in the particulate fraction. The dose-dependent changes in protein kinase C redistibution were correlated with the PRL release by PMA manner. Arachidonate- or 5-HETE-stimulated PRL release was additively increased by 100 nM PMA. 1 μM dopamine significantly decreased all PRL levels that were stimulated by 100 μM arachidonate, 50 μM 5-HETE, 100 nM PMA, 100 μM arachidonated + 100 nM PMA, and 50 μM 5-HETE + 100 nM PMA. These results suggest that the pathway of arachidonate and 5-HETE PRL release is independent pathway from PMA-C-kinase pathway, and dopamine blocks the both pathway after protein kinase C activation and the formation of arachidonate metabolites. These dopamine's inhibitory effects on PRL release indicate the mechanism of bromocriptine, dopamine agonist, curing patients with hyperprolactinemia.

148. Red Blood Cell Aggregation in Normal Pregnant Women

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Enhanced aggregation of red blood cells (RBC) may affect the microcirculation in various organs, especially at a low shear rate. In this study, aggregation rates in 195 normal pregnant women and 50 non-pregnant women were measured by whole blood RBC aggregometer according to gestational age. Pregnant women were divided into five groups: Group 1, 10 weeks or below (14 cases); Group 2, 11~20 weeks (29 cases); Group 3, 21~32 weeks (50 cases); Group 4, 33 weeks or above (82 cases); Group 5, postpartum (20 cases). The red blood cell aggregation rate (RBC-A) was significantly higher ($p<0.01$) in Group 3 (0.144 ± 0.024), Group 4 (0.166 ± 0.027), Group 5 (0.137 ± 0.021) than in the non-pregnant women (0.121 ± 0.025) respectively. Significant positive linear correlation ($p<0.01$) between RBC-A and β-globulin, fibrinogen and significant negative linear correlations ($p<0.01$) between RBC-A and albumin were observed in pregnancy. In conclusion, RBC-A in pregnant women was found to be increased with advancing gestational age.

149. (Abstract is not available)

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150. Changes of Plasmin-α_2-plasmin Inhibitor Complex during Normal Pregnancy and Toxemia of Pregnancy

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